UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

WILDLIFE WATERING FACILITY (NO.)

CODE 648

MONTANA TECHNICAL GUIDE **SECTION IV**

DEFINITION

Develop, improve, or modify watering places and systems for wildlife.

PURPOSE

To provide adequate drinking water for wildlife.

To create, expand, or **enhance** suitable habitat for wildlife.

To improve water quality and accessibility for wildlife.

CONDITIONS WHERE PRACTICE APPLIES

In areas where new, additional, or improved watering places are needed to increase the range, distribution , improve the habitat of, or attract wildlife by meeting their requirements.

Where lack of adequate water has been identified as **a** limiting habitat component.

Water developments are of little or no benefit to wildlife without adequate habitat, especially cover. If the planned habitat quality will not meet the minimum quality criteria in the Field Office Technical Guide (FOTG), Section III, then drinking water is not limiting and this practice does not apply.

CRITERIA

General Criteria for All Purposes

Because each facility is unique to species, habitat, topography, and climate; **this practice** must be **implemented** according to a plan and adapted to the specific site.

Designs for watering facilities shall be according to the following principles:

- **Facilities** shall be sized to accommodate the expected and/or anticipated consumptive rates of target and non-target species.

- The distribution and spacing of facilities shall be based on the **mobility,** home range, territory size, and distribution of the target species. **Refer to the FOTG, Section IV, Practice Standards 644–Wildlife Wetland Habitat Management and 645–Wildlife Upland Habitat Management.**

- **Facilities shall be fenced to prevent damage by livestock or wildlife where danger of damage exists. Refer to FOTG, Section IV, Practice Standard 382–Fencing.**

- The facility **shall** provide accessible and dependable water **of** suitable quality **during** the critical period.

- Ramps shall be installed in open troughs and tanks when **needed to allow target species access and target and non-target species to escape.**

- Design shall include appropriate safety features to minimize the hazards of the facility.

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This type of font **(AaBbCcDdEe 123..)** indicates Montana Supplement.

- Management measures shall be provided to control noxious weeds.

- Facilities shall be designed and installed in compliance with all state, federal and **local** laws including water rights and permits.

- **The facility shall be** designed to withstand freezing **or must be annually** winterized **by draining.**

- **Facilities shall be inspected annually to insure proper functioning.**

CONSIDERATIONS

The typical types of wildlife watering facilities are:

- **Guzzlers and rain traps–typically plastic or fiberglass catchments with storage and drinking facilities.**

- **Spring and seep developments. Refer to FOTG, Section IV, Practice Standard 574–Spring Development.**

- **Tanks and troughs supplied by a pipeline or well. Refer also to FOTG, Section IV, Practice Standards, 614–Trough or Tank; 516– Pipeline; and, 642–Well.**

- **Float or vacuum valve controlled drinking basins. May be installed in new or existing facilities to address wildlife needs.**

- **Excavated or embankment ponds. Refer also to FOTG, Section IV, Practice Standard, 378–Pond.**

General Considerations

- Effects on the target **wildlife population** and the ecosystem **due to** concentrated grazing, predation, hunting, etc.

- **Adaptation of existing water sources.**

- **Accessibility of the site for installation and maintenance.**

- **Period of planned use (summer vs. winter ranges).**

- Aesthetics of the installation. **Troughs, tanks, or other structures should be located in a way that does not detract from the natural viewscape.**

- **In special situations, a permanent watering facility may be supplied by hauling water. Regular dependable delivery must be stressed. Locating such facilities near an access road is advisable.**

Water Quantity Considerations

- **The water budget, including volumes and rates of runoff, infiltration, evaporation, transpiration, deep percolation, and ground water recharge.**

- Effects on downstream flows or groundwater that could affect other water uses or users, **including** associated aquatic **or** wetland sites.

- **Heavy equipment soil compaction impacts during construction to the water bearing zone and surrounding areas.**

Water Quality Considerations

- Potential water quality degradation from nonpoint-source pollutants including sediment and livestock waste.

- Heavy equipment soil disturbance impacts during construction to the water bearing zone and surrounding areas.

- **Effects on the movement of dissolved substances to ground water.**

- **Impacts to the water quality of nearby** wetlands or other aquatic sites.

Site Considerations

- **Consider vegetative measures necessary to protect and enhance the site; consider also the target species needed for escape cover or for open visibility when planning the establishment or management of cover near the watering facility.**

- **Consider the distribution of food and cover, terrain, ecological barriers, disturbance, and other factors that affect wildlife movement and survival.**

- **Consider the site's aspect and exposure and their effect on temperature, wind, evaporation, and snow drift patterns.**

- **Facilities should be located away from disturbance areas where human activity could discourage use by wildlife. Screen plantings may be considered if appropriate.**

- **Whenever possible ponds, guzzlers, and rain traps should be located where excavation can be easily accomplished. A gentle slope for installation of water collection aprons is also desirable. Facilities should not be located where sediment or debris laden runoff will flow into the tank or where damage from flooding is likely.**

PLANS AND SPECIFICATIONS

Plans and specifications shall be prepared in accordance with the criteria of this standard and shall describe the requirements for applying the practice to achieve its intended use. **The following items shall be the minimum documentation requirements for an applied practice:**

- **Location**

- **Targeted species**

- **Type of facility developed**

OPERATION AND MAINTENANCE

The operation and maintenance plan shall include the following:

- Facilities **should** be checked **at least biannually** to insure proper **operation. More frequent inspections during periods of drought or heat stress may be warranted.**

- **Damaged tanks, collection aprons, pipes, and appurtenances will be repaired.**

- **Remove accumulated sediment and debris as needed.**

- Inspect the area adjacent to the facility **for** erosion **damage and treat** as needed.

- Clear or manage vegetation that obstructs wildlife access to water.

- **As appropriate**, **winterize** facilities prior to freezing **conditions**.

- Periodically monitor to insure acceptable water quality **is maintained. Flush or clean tanks and troughs as needed.**

REFERENCES

USDA–Soil Conservation Service. 1956, revised 1971. National Engineering Handbook, Section 4, Hydrology, Chapter 20, Watershed Yield.

USDA–Soil Conservation Service. 1992. Montana Stockwater Pipeline Manual.

Conservation practice standards are reviewed periodically and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.